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The Faculty of Natural Sciences, the Faculty of Mathematics and Physics, the Faculty of Electrical Engineering and Computer Science, the QUEST Leibniz Research School and the Leibniz School of Optics and Photonics (LSO) of Gottfried Wilhelm Leibniz Universität Hannover resolved the amendments to the following common regulations for the doctorate in natural sciences (Dr. rer. nat.) at Gottfried Wilhelm Leibniz Universität Hannover. The Presidential Board approved the regulations on 06.04.2022 as per section 37 paragraph 1 of the Lower Saxony Higher Education Act (NHG).

## **Amendments to the Common Regulations for the Doctorate in Natural Sciences (Dr. rer. nat.) at Gottfried Wilhelm Leibniz Universität Hannover**

### **Section 1 Conferral of the academic degree Dr. rer. nat.**

Gottfried Wilhelm Leibniz Universität Hannover (hereinafter: Leibniz University Hannover), through the faculties mentioned in the appendix, shall confer the academic degree “Doktorin der Naturwissenschaften” or “Doktor der Naturwissenschaften” (Doctor of Natural Sciences, Doctor rerum naturalium, abbreviated: Dr. rer. nat.) on the basis of doctoral proceedings as per the following regulations.

### **Section 2 Doctoral work**

- (1) The doctorate serves as proof of the holder’s ability to carry out in-depth independent scientific work in one or more subject areas of natural science.
- (2) This proof shall take the form of a doctoral thesis (section 8) and either an oral examination (section 9) or a thesis defence (section 10).
- (3) It must be possible to categorise the doctoral thesis in one of the subject areas listed in the appendix; this is the subject area of the doctorate.
- (4) Doctorates may be obtained within the framework of a doctoral programme – for which one or more faculties are responsible – including structured doctoral training or a doctoral studies programme or outside such a doctoral programme or doctoral studies programme.

### **Section 3 Admission requirements**

- (1) <sup>1</sup>As a rule, admission to doctoral studies requires a successfully completed *Diplom, Magister*, state examination or master's degree programme in the subject area of the doctorate at a state or state-recognised institution of higher education in Germany. <sup>2</sup>If this appears necessary in terms of knowledge of the subject area, conditions may be imposed as per paragraph 4. <sup>3</sup>The decision to impose conditions shall be taken by the relevant faculty council.
- (2) <sup>1</sup>Formal recognition is required for degrees from abroad. <sup>2</sup>A prerequisite for such recognition is equivalence with degrees from Germany. <sup>3</sup>The agreements on equivalence approved by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK) and the German Rectors' Conference or the relevant laws must be taken into account when deciding on the equivalence of degrees from abroad. <sup>4</sup>The Central Office for Foreign Education (ZAB) should be heard in case of doubt regarding equivalence. <sup>5</sup>Conditions may be imposed as per paragraph 4. <sup>6</sup>The decision to impose conditions shall be taken by the relevant faculty council.
- (3) <sup>1</sup>Individuals with outstanding abilities who have obtained a bachelor’s degree in Germany may be admitted to doctoral studies on the basis of an aptitude test. <sup>2</sup>In addition, conditions may be imposed as per paragraph 4 which correspond to the requirements of an additional degree programme at Leibniz University Hannover with, as a rule, a duration of two semesters. <sup>3</sup>The decision to impose conditions shall be taken by the relevant faculty council.
- (4) <sup>1</sup>Applicants for whom conditions are imposed as per paragraphs 1, 2 or 3 shall take knowledge tests in three topics from one or more of the subject areas listed in the appendix. <sup>2</sup>The purpose of the knowledge tests is to demonstrate that the applicants possess the skills and knowledge that would be acquired in a completed degree programme as per paragraph 1 or in a combination of such degree programmes at Leibniz University Hannover. <sup>3</sup>In the application as per section 4, the applicant may suggest the topics for these knowledge tests. <sup>4</sup>Previously completed coursework and assessments shall

be credited appropriately and may replace individual knowledge tests. <sup>5</sup>The relevant faculty council shall decide on the topics of the knowledge tests and appoint the examiners. <sup>6</sup>The decision must be communicated to the applicant in writing. <sup>7</sup>The applicant shall agree on examination dates with the examiners. <sup>8</sup>Following the examination, the examiners shall inform the applicant orally of the result of the examination; they shall also inform the dean in writing. <sup>9</sup>As a rule, the knowledge tests are to be completed within the next semester or, where paragraph 3 applies, within the next three semesters after the decision of the faculty council. <sup>10</sup>Candidates may resit failed tests once. <sup>11</sup>For further attempts, applicants must request and obtain the approval of the faculty council.

#### **Section 4 Admission as a doctoral candidate**

- (1) Acceptance of a doctoral candidate expresses the fundamental willingness of the faculty to have persons authorised to evaluate doctoral work evaluate a doctoral thesis on the intended topic as a scientific paper and to supervise the doctoral candidate in the preparation of their doctoral thesis.
- (2) <sup>1</sup>An individual who fulfils the admission requirements as per section 3 shall, upon application, be accepted as a doctoral candidate. <sup>2</sup>At the beginning of their work on the doctoral thesis, an individual who intends to write a doctoral thesis should apply to the faculty in which the subject area of the doctoral thesis is taught for admission to doctoral studies, and hence for acceptance as a doctoral candidate. <sup>3</sup>The application must be submitted in writing to the dean of the relevant faculty. <sup>4</sup>The faculty that accepts such an application for processing is responsible for the doctoral proceedings. <sup>5</sup>The application must include:
  - a) a signed curriculum vitae, including a description of the applicant's personal and professional history and educational background, and supplemented, if applicable, by a complete list of scientific publications,
  - b) proof of academic degrees (as a rule certificates of results of master's degrees, supplemented by the corresponding certificates of results of bachelor's degrees);
  - c) the topic of the doctoral thesis and the subject area of the doctorate as per section 2 paragraph 3,
  - d) a supervision agreement as per section 5 paragraph 6,
  - e) a declaration on ongoing or previous applications to commence doctoral proceedings stating, if applicable, when, on which subject, at which higher education institution, and at which faculty commencement of doctoral proceedings was applied for,
  - f) if necessary, suggestions for knowledge tests as per section 3 paragraph 4.

The application and the enclosed documents shall remain with the dean's office.
- (3) <sup>1</sup>As a rule, the relevant faculty council shall decide on the application within three months; for doctoral studies programmes, by the start of the curriculum. <sup>2</sup>Conditions as per section 3 paragraph 4 shall be included in the notification of admission as a doctoral candidate. <sup>3</sup>The admission shall include a deadline.
- (4) <sup>1</sup>The applicant shall be notified in writing of their admission or rejection as a doctoral candidate. <sup>2</sup>Reasons must be given for a rejection; the notification of rejection must include information on legal remedies.
- (5) Admission as a doctoral candidate may be revoked for valid reasons, in particular if deadlines set as per section 3 paragraph 4 for the fulfilment of conditions have been exceeded without valid reason or if the doctoral candidate is in serious breach of obligations under the supervision agreement.
- (6) Individuals who have been accepted as doctoral candidates shall enrol as doctoral students at Leibniz University Hannover as per section 9 paragraph 2 of the Lower Saxony Higher Education Act (NHG).

#### **Section 5 Supervision**

- (1) As a matter of principle, supervisors are those who are authorised to evaluate doctoral work.
- (2) <sup>1</sup>Those who are authorised to evaluate doctoral work include:
  - a) members of the group of professors and junior professors of the relevant faculty of Leibniz University Hannover,
  - b) Privatdozentinnen and Privatdozenten (lecturers) who are members of the relevant faculty of Leibniz University Hannover as well as other members of the relevant faculty of Leibniz University Hannover with a postdoctoral teaching qualification (Habilitation).

<sup>2</sup>Privatdozentinnen and Privatdozenten (lecturers), other members of Leibniz University Hannover with a postdoctoral teaching qualification (Habilitation) and members of other faculties of Leibniz University Hannover or Hannover Medical School (Medizinische Hochschule Hannover) and the University of Veterinary Medicine Hannover, Foundation (Stiftung Tierärztliche Hochschule Hannover) authorised to

evaluate doctoral work may also be recognised as supervisors with the approval of the relevant faculty council. <sup>3</sup>The relevant faculty council may stipulate that if one supervisor is based at either Hannover Medical School or the University of Veterinary Medicine Hannover, Foundation, then at least one additional supervisor from the relevant faculty at Leibniz University must be included in the proceedings.

- (3) Leaders of independent junior research groups funded on the basis of an external evaluation procedure conducted by a research funding institution, in particular by the Emmy Noether Programme of the DFG, the Volkswagen Foundation, the European Research Council or organisations of equal rank, or leaders of independent junior research groups who have been appointed to their position in an internal appointment procedure involving external experts, may also be admitted as individuals authorised to evaluate doctoral work by resolution of the faculty council.
- (4) The relevant faculty council may authorise members and affiliates of Leibniz Universität Hannover who have postdoctoral qualifications equivalent to a habilitation to evaluate doctoral work for a specific doctoral project. The relevant faculty council may define further conditions for such cases.
- (5) <sup>1</sup>Cooperative supervision by several supervisors may also be permitted in accordance with the supervision agreement as per paragraphs 1 to 3. <sup>2</sup>An individual authorised to evaluate doctoral work from another higher education institution may also be one of the supervisors.
- (6) <sup>1</sup>The supervision agreement between the doctoral candidate, the supervisor/s and the relevant faculty governs the framework and conditions for the supervision of doctoral candidates by the supervisors. <sup>2</sup>The supervision agreement shall include at least:
  - a) The names and signatures of the doctoral candidate, the supervisor and the relevant faculty;
  - b) the provisional topic of the doctoral thesis with a project outline;
  - c) the supervisor's declaration of willingness to provide the doctoral candidate with proper scientific supervision;
  - d) the requirement that the doctoral candidate regularly reports to the supervisor on the progress of the project, as well as the requirement for the supervisor to receive regular progress reports on the doctoral thesis.
- (7) The dean's office must be notified of updates to the supervision agreement.

## Section 6 Application for a doctorate

- (1) <sup>1</sup>The application for a doctorate shall be submitted in writing to the dean of the relevant faculty at the earliest three months after admission as a doctoral candidate and fulfilment of the requirements as per section 4. <sup>2</sup>The application must include:
 

a signed curriculum vitae, including a description of the applicant's personal and professional history, a complete list of scientific publications,

four identical copies of the doctoral thesis in printed form and one identical, electronically readable version. The doctoral thesis must be written in German or English. Upon substantiated request, the faculty council may permit preparation of the doctoral thesis in another language.

Declarations by the doctoral candidate

  1. that they are aware of the applicable doctoral regulations and have observed them and are willing to undertake an examination in accordance with the provisions of the doctoral regulations,
  2. that they have authored the doctoral thesis themselves (statement of authorship), have not adopted passages from third parties or from their own examination papers without attribution and that they have indicated all the resources and sources used in their work,
  3. that they have not granted third parties direct or indirect payment or payment in kind for content-related work on the doctoral thesis or for the arrangement of such services (i.e., the academic thesis has not been purchased or made available in part or in whole in return for payment or other consideration),
  4. that they have not previously submitted the doctoral thesis for another examination,
  5. whether the same work or one similar in substantial parts has been submitted to another faculty or higher education institution as a doctoral thesis and, if so, with which result; at the same time, the candidate must state whether they submitted a different paper as a doctoral thesis elsewhere and, if so, with which result,
  6. that they agree that the doctoral thesis be subjected to a review of compliance with generally accepted scientific standards.
- (2) <sup>1</sup>Together with the application for a doctorate, the doctoral candidate shall state whether they choose an oral examination (section 9) or a thesis defence (section 10). <sup>2</sup>If they choose an oral examination, they shall indicate two examination subjects chosen as per section 9 paragraph 2. <sup>3</sup>In order to expedite the

procedure, the supervisor shall make recommendations regarding the appointment of reviewers and the composition of the doctoral committee (section 7) as well as the place and time of the oral examination (section 9) or the thesis defence (section 10).

- (3) The application, a copy of the doctoral thesis submitted and the documents submitted shall remain with the dean's office.
- (4) <sup>1</sup>The application for a doctorate may be withdrawn. <sup>2</sup>Withdrawal is no longer possible if the dean's office has already received a review.

### **Section 7 Commencement of the doctoral proceedings**

- (1) <sup>1</sup>The relevant faculty council shall decide on commencement of the doctoral proceedings. <sup>2</sup>The doctoral candidate shall receive a written notification thereof. <sup>3</sup>If the doctoral candidate has chosen to have an oral examination, the faculty council shall also formally decide whether to approve the chosen combination of subjects.
- (2) <sup>1</sup>The faculty council shall appoint a doctoral commission upon commencement of the doctoral proceedings. <sup>2</sup>On the basis of written reviews as per paragraph 3, the doctoral commission shall deliberate and decide on the acceptance and evaluation or the rejection of the doctoral thesis. <sup>3</sup>It shall conduct the oral examination or the thesis defence and evaluate these elements of the doctoral work. <sup>4</sup>Concerning the composition of the doctoral commission, see paragraph 7.
- (3) <sup>1</sup>For the preparation of one written review of the doctoral thesis, the faculty council shall appoint a reviewer (expert) who is authorised to evaluate doctoral work as per section 5 paragraphs 2 to 5 for the scientific subject that the doctoral thesis chiefly deals with. <sup>2</sup>In exceptional cases, individuals authorised to evaluate doctoral work from one of the higher education institutions listed in section 5 paragraph 2 may also be appointed as reviewers (experts) within three years of their departure.
- (4) <sup>1</sup>Furthermore, the faculty council shall appoint one or more co-reviewers authorised to evaluate doctoral work as additional reviewers of the higher education institutions listed in section 5 paragraph 2, or other higher education institutions with the right to confer doctorates, for the purpose of preparing further written reviews of the doctoral thesis. <sup>2</sup>An individual authorised to evaluate doctoral work and from a higher education institution other than those specified in section 5 paragraph 2 may, upon application, act as an additional reviewer (additional co-reviewer). <sup>3</sup>The relevant faculty council may stipulate that a higher number of reviewers (co-reviewers) is required and that one of these individuals must be affiliated with a higher education institution other than Leibniz University Hannover.
- (5) If the doctoral thesis deals with a subject area covered by a faculty other than the relevant faculty as per section 4, and if it appears necessary for the evaluation of the doctoral candidate's academic performance, a reviewer from that faculty shall be appointed by resolution of the faculty council.
- (6) If the doctoral thesis has been encouraged and supervised by an individual who is not affiliated with a higher education institution, this individual may be requested, by resolution of the faculty council, to submit an expert opinion.
- (7) <sup>1</sup>The relevant faculty council shall appoint as members of the doctoral commission at least three persons authorised to evaluate doctoral work, one of whom is a member of the relevant faculty of Leibniz University Hannover and is requested to serve as chair. <sup>2</sup>At least two members must work full-time at one of the higher education institutions listed in section 5 paragraph 2. <sup>3</sup>As a rule, the doctoral commission for the oral examination as per section 9 has two examiners for the major subject and at least one examiner for the minor subject selected. <sup>4</sup>The referees (experts or co-reviewers) may belong to the doctoral commission, but the supervisor and the reviewer (expert) may not serve as chair. <sup>5</sup>If a person who does not belong to a higher education institution is requested to provide an expert opinion as per section 7 paragraph 6, this person should be asked to serve on the doctoral commission in an advisory capacity.
- (8) <sup>1</sup>The doctoral commission shall meet in closed session. <sup>2</sup>Its resolutions shall be recorded in minutes of the proceedings. <sup>3</sup>The doctoral commission constitutes a quorum if all appointed members are present.

An external member of the doctoral commission who attends this body's deliberations remotely and in real time, in particular via telephone or video conference, shall also be counted as present. <sup>5</sup>Upon separate application in individual cases, this may also apply to internal members of the doctoral commission, provided that at least two internal members of the doctoral commission including the chair are physically present; the relevant faculty council may determine the details of the application procedure.

- (9) <sup>1</sup>The members of the doctoral commission shall be obliged to maintain secrecy regarding facts which have come to their knowledge in closed session, unless a fact is already known or does not require secrecy in terms of its significance. <sup>2</sup>Disclosure obligations arising from any employment relationship

remain unaffected.

- (10) Participation rights of individuals authorised to evaluate doctoral work in doctoral proceedings shall not be affected by their receipt of emeritus status, pensioning or retirement.

## Section 8 Doctoral thesis

- (1) <sup>1</sup>With their doctoral thesis, the doctoral candidate shall demonstrate their ability to achieve results in independent scientific work which advance the subject area of the doctorate. <sup>2</sup>The doctoral thesis is a piece of scientific research which constitutes a scientific advance and was written independently by the doctoral candidate. <sup>3</sup>The doctoral thesis must deal with a coherent topic and include a self-contained presentation of the research work and its results. <sup>4</sup>The doctoral thesis must not have been published; parts of it may be published prior to its submission.
- (2) <sup>1</sup>The doctoral thesis shall begin with a short summary in German and an abstract in English of no more than one page each; the relevant faculty council may stipulate that the German summary be dispensed with if the doctoral thesis was written in English. <sup>2</sup>The doctoral thesis should conclude with a brief curriculum vitae including the doctoral candidate's educational background and a complete list of scientific publications.
- (3) <sup>1</sup>If a doctoral thesis consists of several scientific publications (thesis by publication), the successive publications must have been written to address a common research topic. <sup>2</sup>The relevant faculty council may stipulate that these publications must have been published in peer-reviewed scientific journals or demonstrably accepted for publication. <sup>3</sup>A detailed synthesis must be presented at the start of the doctoral thesis which critically places the research topics and the most important findings from the publications in the context of the scientific literature on the topic and sets forth the individual contributions of the author and, if applicable, other authors to the relevant publications.
- (4) The reviewers shall examine in detail, individually and independently of each other, whether the doctoral thesis submitted can be recognised as doctoral work.
- (5) <sup>1</sup>Each reviewer shall prepare a written review, recommending either the acceptance or the rejection of the doctoral thesis and giving reasons for this recommendation. <sup>2</sup>A recommendation for acceptance may stipulate certain conditions. <sup>3</sup>If acceptance of the doctoral thesis is recommended, a recommendation as to the grade must also be made, giving reasons. <sup>4</sup>The following grades shall apply:
- 0 = summa cum laude = ausgezeichnet = with distinction
  - 1 = magna cum laude = sehr gut = very good
  - 2 = cum laude = gut = good
  - 3 = rite = genügend = pass
  - insufficenter = ungenügend = fail
- <sup>3</sup>If only two reviewers were appointed and both award the doctoral thesis the grade "with distinction", the faculty council can appoint further reviewers.
- (6) <sup>1</sup>As a rule, reviews shall be submitted within six weeks of the commencement of the doctoral proceedings. <sup>2</sup>Otherwise the faculty council may appoint other reviewers.
- (7) <sup>1</sup>The doctoral thesis, the reviews and any expert opinions shall be made available for viewing by those individuals of the relevant faculty authorised to evaluate doctoral work for at least two weeks. <sup>2</sup>These persons shall have the right to object to proposed evaluations of the doctoral thesis during this viewing period. <sup>3</sup>Any objections must be substantiated and addressed in writing to the dean.
- (8) The doctoral thesis shall be deemed to have been accepted if all reviewers have recommended its acceptance and if no objection has been raised as per paragraph 7.
- (9) The doctoral thesis shall be deemed to have been rejected if all reviewers have recommended its rejection and if no objection to the rejection has been raised as per paragraph 7. <sup>2</sup>The doctoral proceedings is thereby concluded, and the dean of the faculty shall inform the doctoral candidate of the decision in writing, stating the reasons and providing information on legal remedies.
- (10) <sup>1</sup>If acceptance has been recommended subject to conditions as per paragraph 5, the doctoral commission shall decide on the conditions to be fulfilled. <sup>2</sup>The chair of the doctoral commission shall inform the doctoral candidate and the dean thereof and shall set a reasonable deadline for fulfilling the conditions. <sup>3</sup>The doctoral commission shall formally decide on whether these conditions have been fulfilled.
- (11) <sup>1</sup>If a decision on whether to accept the doctoral thesis has not been made following the procedure as per paragraphs 8 to 10, the faculty council shall appoint the following: further reviewers (co-reviewers), if possible from outside the faculty; additional members of the doctoral commission, as appropriate, so that the latter comprises at least five individuals authorised to evaluate doctoral work, and, as

appropriate, a replacement chair. <sup>2</sup>Paragraphs 4 to 6 shall apply accordingly. <sup>3</sup>After completion of the period for viewing the additionally requested reviews (paragraph 7), the doctoral commission shall deliberate, taking into consideration all reviews and all objections received. <sup>4</sup>Individuals who have raised an objection as per paragraph 7 may attend the meeting in an advisory capacity. <sup>5</sup>The doctoral commission shall decide on acceptance of the doctoral thesis and, if it is accepted, shall determine the final grade. <sup>6</sup>If the doctoral thesis cannot be accepted immediately, but if, after the fulfilment of conditions relating to the scientific work, successful completion of the work within a reasonable period of time is to be expected, the doctoral commission shall initially decide only on the conditions to be fulfilled. <sup>7</sup>It must also stipulate a reasonable period of time for fulfilling the conditions. <sup>8</sup>The period may be extended upon application by the doctoral candidate, for valid reasons, by resolution of the doctoral commission. <sup>9</sup>If the conditions are not fulfilled in due time, the doctoral thesis shall be deemed not to have been accepted. <sup>10</sup>This shall be communicated in writing to the doctoral candidate by the dean, with information on legal remedies. <sup>11</sup>Once the conditions have been fulfilled, the doctoral commission shall again decide on acceptance of the doctoral thesis and, as appropriate, on its grade. <sup>12</sup>If the doctoral thesis is rejected, the doctoral proceedings are concluded. <sup>13</sup>The dean of the faculty shall inform the doctoral candidate of this in writing, stating the reasons and providing information on legal remedies.

### Section 9 Oral examination

- (1) <sup>1</sup>The oral examination shall cover a major subject and a minor subject as per paragraph 2. <sup>2</sup>The oral examination in the major subject serves to demonstrate that the doctoral candidate has appropriately broad and deep expertise in the subject. <sup>3</sup>This includes the ability to critically discuss the research issue and the results of the doctoral thesis and to place them within the overall context of the major subject. <sup>4</sup>The oral examination in the minor subject is intended to determine whether the doctoral candidate has in-depth knowledge in both content and methodology as well as an awareness of recent developments.
- (2) <sup>1</sup>The major subject must be chosen from the subject area of the doctorate from which the subject matter of the doctoral thesis is substantially drawn. <sup>2</sup>The subjects in those subject areas listed in the appendix can be freely combined as major and minor subjects. <sup>3</sup>The relevant faculty council may also decide to permit other subjects as minor subjects. <sup>4</sup>A combination of subjects that overlap considerably is not permitted.
- (3) <sup>1</sup>If the doctoral thesis has been accepted and this type of examination has been chosen, the dean of the relevant faculty shall stipulate a date and place for the oral examination in suitable premises as soon as possible. <sup>2</sup>The doctoral candidate and the members of the doctoral commission shall be notified in writing of the place and time of the oral examination, stating the title of the doctoral thesis, and this information shall also be announced at the higher education institutions mentioned in section 5 paragraph 2. <sup>3</sup>At least five working days must elapse between notification and examination. <sup>4</sup>The chair of the doctoral commission shall preside over the examination. <sup>5</sup>Section 7 paragraph 8 sentences 4 and 5 shall apply accordingly. <sup>6</sup>The relevant faculty council may determine whether, or under which conditions, the doctoral candidate may be physically absent.
- (4) <sup>1</sup>The individuals authorised to evaluate doctoral work at the faculties listed in the appendix have the right to be present at the oral examinations. <sup>2</sup>Other individuals wishing to sit in may be admitted with the consent of the doctoral candidate and the chair. (5) <sup>1</sup>Each doctoral candidate shall be examined individually. <sup>2</sup>The examination shall begin with a brief presentation of 15 to 20 minutes' duration in which the doctoral candidate summarises the main contents and results of the doctoral thesis. <sup>3</sup>As a rule, this brief presentation shall be open to members of the university; in agreement with the doctoral candidate, the chair may decide to limit attendees as per paragraph 4. <sup>4</sup>The subsequent non-public examination shall last no less than 60 and no more than 100 minutes, of which at least 30 minutes shall relate to the major subject. <sup>5</sup>During the oral examination, following the examinations in the major and minor subjects, any person present authorised to evaluate doctoral work may ask questions about the doctoral thesis.

### Section 10 Thesis defence

- (1) <sup>1</sup>The thesis defence shall comprise a scientific presentation which communicates the essential contents and results of the doctoral thesis, and a subsequent discussion. <sup>2</sup>The purpose of the thesis defence is to show that the doctoral candidate is able to critically discuss the results of their doctoral thesis and to place them in the wider scientific context. <sup>3</sup>This includes the ability to present and explain in-depth content-related and methodological knowledge in the main scientific fields of the doctoral thesis.
- (2) <sup>1</sup>If the doctoral thesis has been accepted and this type of examination has been chosen, the dean of the relevant faculty shall stipulate a date and place for the thesis defence in suitable premises as soon as possible. <sup>2</sup>The doctoral candidate and the members of the doctoral commission shall be notified in writing of the place and time of the thesis defence, stating the title of the doctoral thesis, and this

information shall also be announced at the higher education institutions mentioned in section 5 paragraph 2. <sup>3</sup>At least five working days must elapse between notification and examination. <sup>4</sup>The chair of the doctoral commission shall preside over the examination. <sup>5</sup>Section 7 paragraph 8 sentences 4 and 5 shall apply accordingly. <sup>6</sup>The relevant faculty council may determine whether, or under which conditions, the doctoral candidate may be physically absent.

- (3) The thesis defence is open to members of the university.
- (4) <sup>1</sup>Each doctoral candidate shall be examined individually. <sup>2</sup>The thesis defence shall begin with a presentation by the doctoral candidate (maximum duration: 45 minutes). <sup>3</sup>After the end of the presentation, the members of the doctoral commission have the right to ask questions about the presentation and the wider scientific context of the doctoral thesis. <sup>4</sup>After this, the other attendees will be given the opportunity to ask questions about the presentation. <sup>5</sup>The duration of the thesis defence should be at least 75 minutes, but should not exceed 120 minutes.

### **Section 11 Assessment of the oral examination or thesis defence and overall grade awarded for the doctorate**

- (1) The overall grade is derived from the grades of the doctoral thesis and either the oral examination or the thesis defence.
- (2) <sup>1</sup>Immediately after the oral examination or thesis defence, the doctoral commission shall meet to determine whether and with which result the doctoral candidate has passed their oral examination or thesis defence, the grade to be awarded for the doctoral thesis and the overall grade to be awarded for the doctoral work. <sup>2</sup>The individuals from the faculties listed in the appendix who are authorised to evaluate doctoral work and were present at the oral examination or the thesis defence may attend the meeting of the doctoral commission in an advisory capacity.
- <sup>3</sup>The assessment of each member of the doctoral commission shall have equal weight. <sup>4</sup>In the case of the oral examination, the impression gained from the brief presentation must be taken into account in the grade. <sup>5</sup>When assessing the thesis defence, the quality of the presentation and the thematic relevance of the questions asked must be taken into account. <sup>6</sup>The examinations shall be assessed by awarding one of the grades listed in section 8 paragraph 5; alternatively, the doctoral candidate shall be deemed to have failed the examination in question.
- (3) <sup>1</sup>In determining the grade for the doctoral thesis, the evaluations of all reviewers shall carry equal weight. <sup>2</sup>For a doctoral thesis to be given the overall grade "summa cum laude", this grade must be unanimously recommended by all reviewers, and at least three reviews, including one from a higher education institution other than those mentioned under section 5 paragraph 2, must have been received. <sup>3</sup>The supervisor shall notify the faculty council prior to the commencement of doctoral proceedings (section 7 paragraph 2) if there is a reasonable prospect of the grade "summa cum laude" being awarded, and shall submit recommendations for further reviewers within the meaning of sentence 2 to the faculty council. <sup>4</sup>If a grade for the doctoral thesis has already been awarded as per section 8 paragraph 11, this grade shall be adopted.
- (4) <sup>1</sup>The grade for the doctoral thesis shall count 2/3 towards the overall grade for the doctoral work. <sup>2</sup>Depending upon the overall impression gained in the various parts of the examination, and if the average grade for any part of the examination lies between two whole grades, the doctoral commission may – by way of an additional grading decision – round such averages up or down to the nearest whole grade as per section 8 paragraph 5. <sup>3</sup>The overall assessment "summa cum laude" may be awarded only if both the doctoral thesis and the oral examination or thesis defence have been graded as "summa cum laude".
- (5) <sup>1</sup>If – without sufficient reasons – the doctoral candidate fails to attend their oral examination or thesis defence, or fails to complete their oral examination or thesis defence, they shall be deemed to have failed their oral examination or thesis defence. <sup>2</sup>If there are sufficient reasons, the dean shall set a new date as per section 9 paragraph 2 or section 10 paragraph 2.
- (6) <sup>1</sup>Brief written minutes shall be kept of the oral examination or the thesis defence. <sup>2</sup>As well as the venue and date of the examination and the time it started and ended, it shall state:
1. — the names of the doctoral candidate, the examiners and, if an oral examination is held, of any other persons present;
  2. — the title of the doctoral thesis;
  3. — whether the examination has been passed;
  4. — the grade of the oral examination or thesis defence;

5. — the grade of the doctoral thesis;
6. — the overall grade of the doctorate.

<sup>2</sup>The minutes shall be signed by the chair of the doctoral commission and forwarded to the dean immediately after completion of the oral examination or thesis defence.

- (7) <sup>1</sup>The chair of the doctoral commission shall immediately inform the doctoral candidate of the outcomes specified in paragraph 6 and issue them a provisional certificate. <sup>2</sup>This includes the title of the doctoral thesis, the overall grade of the doctorate, the grade of the doctoral thesis and the grade of the oral examination or thesis defence. <sup>3</sup>It must be noted on the certificate that it does not yet allow the candidate to use the title “Dr. rer. nat.”.
- (8) <sup>1</sup>If the doctoral candidate failed the oral examination or the thesis defence, they may, upon application to the dean, resit their oral examination or thesis defence once after three months at the earliest and twelve months at the latest. <sup>2</sup>If the doctoral candidate once again fails to pass or does not apply to resit, the attempt to obtain a doctorate shall be deemed as irrevocably failed. <sup>3</sup>The doctoral candidate shall receive notification to this effect from the faculty, signed by the dean, and including information on legal remedies.
- (9) <sup>1</sup>The doctoral commission may impose conditions on the doctoral candidate regarding the final publicly available version of record of the doctoral thesis. <sup>2</sup>Any such conditions shall be included in the minutes of the examination. <sup>3</sup>The chair of the doctoral commission shall verify compliance with the conditions, approve the final version if necessary, provide written confirmation of this to the doctoral candidate and inform the dean.
- (10) The doctorate has formally been completed when the doctoral candidate has passed their oral examination or thesis defence.

### **Section 12 Publication of the doctoral thesis**

- (1) <sup>1</sup>Within one year of passing their oral examination or thesis defence, the doctoral candidate shall publish the approved final version (section 8 paragraphs 8, 10, 11; section 11 paragraph 9) of the doctoral thesis. <sup>2</sup>The rules governing this, as well as the number of copies to be delivered, shall be determined by the relevant faculty in accordance with the general guidelines adopted by the Senate of Leibniz University Hannover.
- (2) <sup>1</sup>If the doctoral candidate fails to meet the publication deadline, their rights acquired in the course of the doctoral proceedings shall be forfeited. <sup>2</sup>They must return the provisional certificate as per section 11 paragraph 7. <sup>3</sup>Upon substantiated request by the doctoral candidate, the dean shall decide on a reasonable extension of the deadline for publication.

### **Section 13 Doctoral certificate and conferral of the doctorate**

- (1) <sup>1</sup>The dean shall confer the doctorate by issuing, in person or by post, the doctoral certificate in German and additionally a translation in English. <sup>2</sup>This shall state the academic title obtained, the title of the doctoral thesis and the overall grade of the doctorate, as well as the grades of the doctoral thesis and the oral examination or thesis defence. <sup>3</sup>The doctoral certificate shall be signed personally by the President of Leibniz University Hannover and by the dean of the faculty, and shall bear the seal of Leibniz University Hannover. <sup>4</sup>The day on which the doctorate is officially conferred shall be indicated as the day of the oral examination or thesis defence.
- (2) <sup>1</sup>The doctoral certificate shall be issued only when proof of delivery of the version of record of the doctoral thesis (as per section 12) has been furnished and the other obligations set out in the appendix have been fulfilled. <sup>2</sup>Only after the doctoral certificate has been issued shall the candidate be entitled to use the title “Dr. rer. nat.”.

### **Section 14 Renewal of the doctoral certificate**

At the request of a member of the faculty, the doctoral certificate may be renewed on the occasion of the fiftieth anniversary of the oral examination or the thesis defence by resolution of the faculty council.

### **Section 15 Revocation of a doctoral degree**

- (1) <sup>1</sup>A doctoral degree already conferred may be withdrawn or revoked. <sup>2</sup>The withdrawal or revocation of the doctoral degree shall be in accordance with the applicable legal provisions, applying the Regulations of Leibniz University Hannover for Safeguarding Good Scientific Practice and for dealing with scientific misconduct.



- (2) <sup>1</sup>If the prerequisites for admission to doctoral studies were not fulfilled but there was no deception or attempted deception on the part of the candidate, and if this fact becomes known only after the certificate has been issued, this mistake shall be considered as having been remedied by the submitted and recognised doctoral thesis and by the candidate's passing the oral examination or thesis defence. <sup>2</sup>In this case, revocation of the doctorate shall not be considered.

### **Section 16 Access to records**

<sup>1</sup>The doctoral candidate shall be entitled, upon request, to inspect the documents relating to the doctorate within one month of receipt of the doctoral certificate or of a negative notification. <sup>2</sup>The period may be extended upon application by the doctoral candidate, for valid reasons.

### **Section 17 Objection to decisions in doctoral proceedings**

- (1) <sup>1</sup>The applicant shall be informed in writing of the decisions regarding admission to the doctoral proceedings, on acceptance or rejection of the doctoral thesis, and on the oral examination or thesis defence. <sup>2</sup>Each negative notification by the faculty and/or the doctoral commission must be substantiated and accompanied by information on legal remedies.
- (2) The individual affected may submit a written objection to the decision to the dean of the relevant faculty within one month of notification.

### **Section 18 Honorary doctorate**

- (1) Leibniz University Hannover may, through the relevant faculties as per the appendix and in consultation with the Senate, confer the academic title "Doktor/Doktorin der Naturwissenschaften ehrenhalber" (Doctor rerum naturalium honoris causa, abbreviated: Dr. rer. nat. h. c.) to honour outstanding achievements in the natural sciences.
- (2) The person to be honoured must not be a member of Leibniz Universität Hannover.
- (3) <sup>1</sup>An application to this effect must be submitted by at least five professors from the faculties listed in the appendix or from the natural science fields of Hannover Medical School or from the University of Veterinary Medicine Hannover, Foundation. <sup>2</sup>The faculty whose area is the chief thematic focus of the achievements to be honoured shall decide on this conferral.
- (4) The honorary doctorate shall be conferred by presentation of a certificate in which the achievements of the person to be honoured are to be highlighted; it is to be signed personally by the President of Leibniz University Hannover and the dean of the faculty and shall bear the seal of Leibniz University Hannover.
- (5) All relevant ministries and all higher education institutions entitled to confer doctorates within the area where the Basic Law of the Federal Republic of Germany applies shall be notified of the honorary doctorate.
- (6) Leibniz University Hannover's rules governing honorary appointments and section 15 shall apply accordingly concerning revocation of honorary doctorates.

### **Section 19 Amendments to the doctoral regulations**

Identical resolutions by all faculties listed in the appendix are required to amend these common doctoral regulations.

### **Section 20 Deviating authority**

<sup>1</sup>Unless otherwise stipulated in these regulations, the faculty council of the relevant faculty shall be responsible for doctoral proceedings. <sup>2</sup>The faculty council may, to reduce its workload, temporarily or permanently transfer authority as described in these regulations to a commission it shall appoint or to the dean.

### **Section 21 Joint doctoral proceedings with other higher education institutions**

- (1) Joint doctoral proceedings with one or more other higher education institutions in Germany or abroad shall be conducted on the basis of an agreement between Leibniz University Hannover, with the participation of the relevant faculty, and the higher education institution or institutions concerned.
- (2) Agreements between Leibniz University Hannover and other higher education institutions concerning joint doctoral proceedings may deviate from sections 1 to 17.
- (3) <sup>1</sup>In the event of doctoral proceedings for a single doctorate involving a faculty as per the appendix and a higher education institution outside Germany, the faculty council concerned shall be authorised to

approve decisions for individual cases. <sup>2</sup>These must be at least equivalent to the requirements of these doctoral regulations.

**Section 22 Entry into force and transitional provisions**

- (1) <sup>1</sup>These doctoral regulations shall take effect on the day following publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover. <sup>2</sup>All prior doctoral regulations regarding the academic title "Dr. rer. nat." shall become invalid.
- (2) Doctoral candidates who have applied for a doctorate before these regulations come into force shall continue the doctoral degree as per the previously applicable regulations.

## Appendix

(1)<sup>1</sup>These doctoral regulations apply to the following faculties of Gottfried Wilhelm Leibniz Universität Hannover:

Faculty of Natural Sciences

Faculty of Mathematics and Physics

Faculty of Electrical Engineering and Computer Science

QUEST Leibniz Research School

Leibniz School of Optics and Photonics

<sup>2</sup>Any change to this list requires the agreement of all faculties on this list.

(2)<sup>1</sup>The subject area of a doctorate as per section 2 paragraph 3 may be one of the following:

Biology

Chemistry

Food Science

Geosciences

Geography

Computer Science

Mathematics

Meteorology

Optics and Photonics

Physics

<sup>2</sup>Any change to this list requires the agreement of all faculties as per paragraph 1.

<sup>3</sup>The subjects for knowledge tests as per section 3 paragraph 4 as well as the major subject and minor subject of the oral examination as per section 9 paragraph 2 must be in these subject areas.

**Appendix as per section 13 paragraph 2**

The supervisor declares:

All the data, samples, lab notebooks and the like used for the doctoral thesis as well as resources made available on a temporary basis such as keys, transponders etc. have been returned in good order.

Since the doctoral candidate will continue working in the research group after completing the doctorate, the equipment and resources made available to them shall remain in their possession until further notice.

The following is agreed concerning the equipment and resources made available:

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Date and signature (Supervisor)